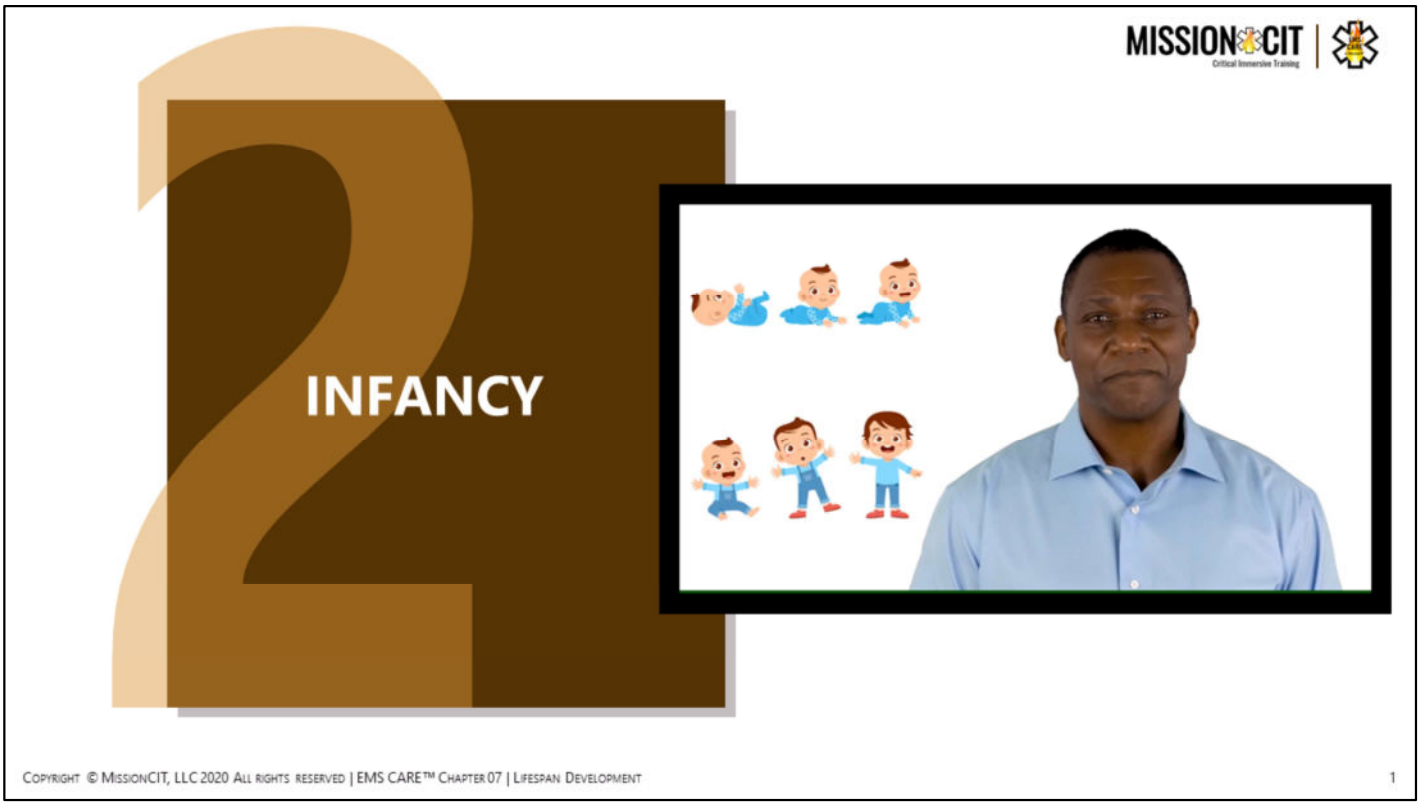
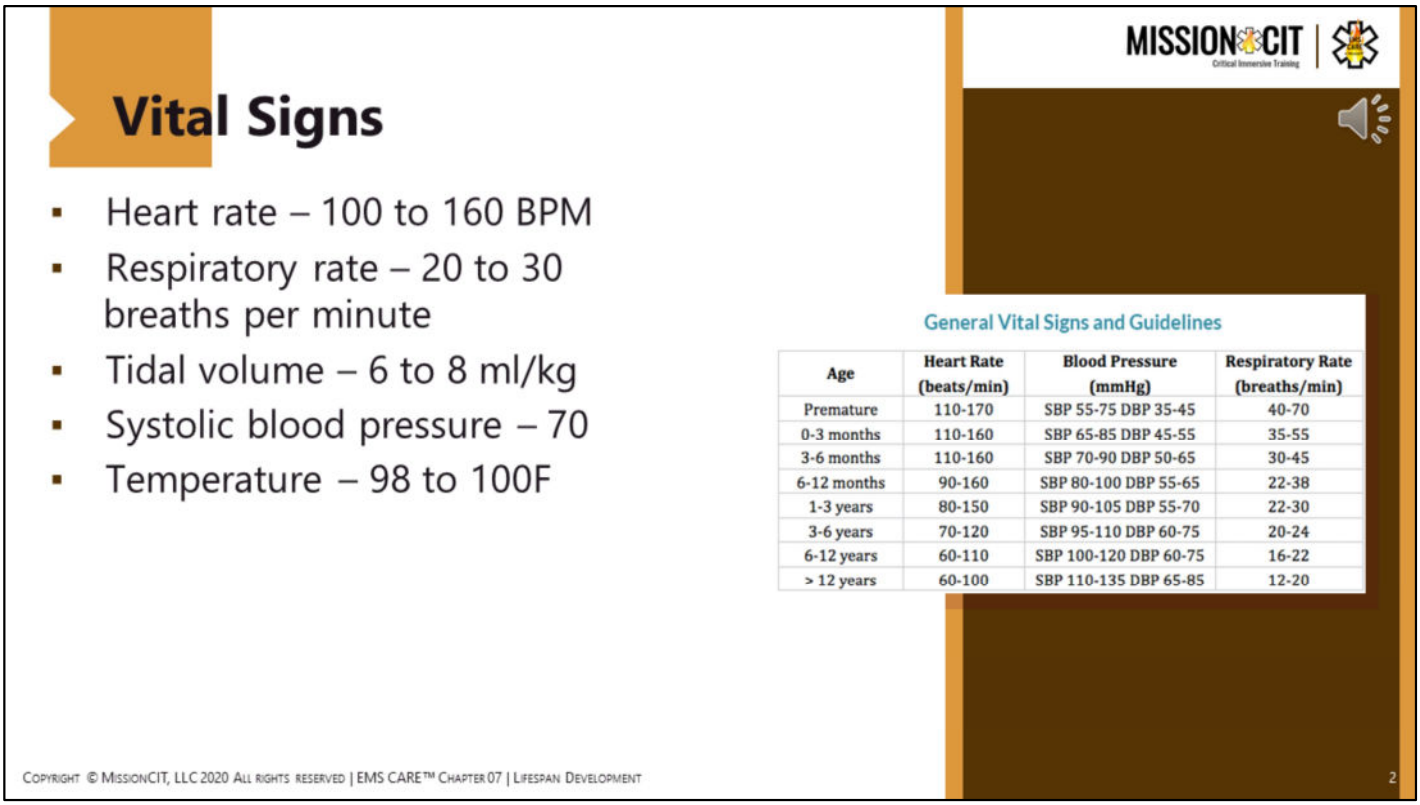


Thank you, Missah.

Welcome to this exciting lesson where we talk about how humans evolve from their birth. In this lesson, we will go deep into the vital signs and expected behavior from the time of birth to the first year of life. At this age, children are known as infants and it marks the important transitions that they go through to adapt for life outside the mother's womb.

As an EMT, knowing this information can help you to quickly spot the problems that may come up in the infant's health during this critical time.

Good studying!

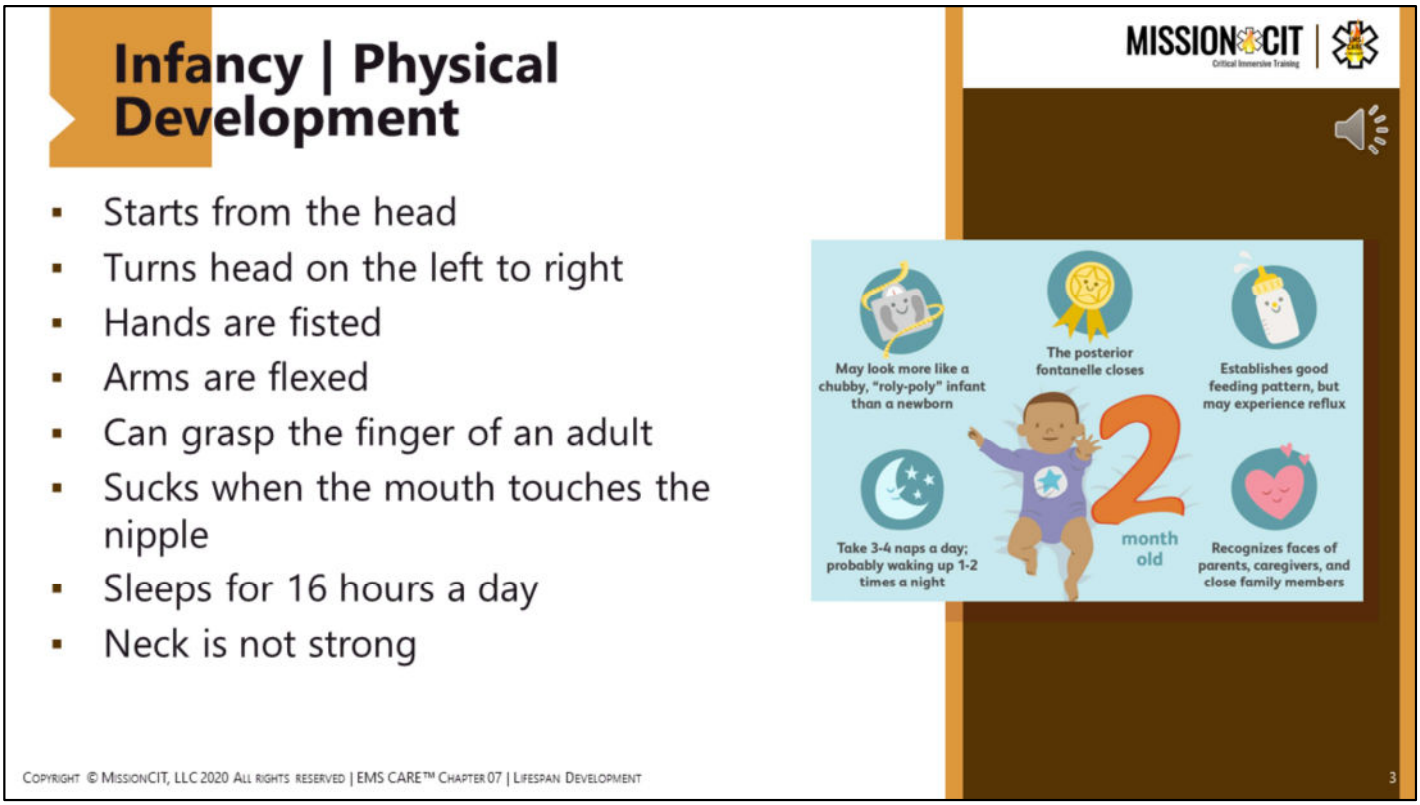


For infants, the heart rate hovers from 100 to 160 beats per minute during the first 30 minutes of birth and after this, the heart rate settles to around 120 beats per minute.

Similarly, the respiratory rate drops to 30 to 40 breaths in the first 30 minutes of life from 50 to 60 present at the time of birth. Eventually, it slows to 20 to 30 by the first year. The tidal volume, on the other hand, increases from 6 to 8 milliliters per kg at the time of birth to about 10 to 15 milliliters per kg by the first birthday.

As for the blood pressure, the average systolic pressure increases from 70 at birth to 90 by the first year, and the temperature range from 98 to 100 degrees Fahrenheit throughout.

Finally, most healthy babies weigh around 3 to 3.5 kilograms at the time of birth and slowly increase over the first year. However, there is a five to ten percent drop in weight in the first year.



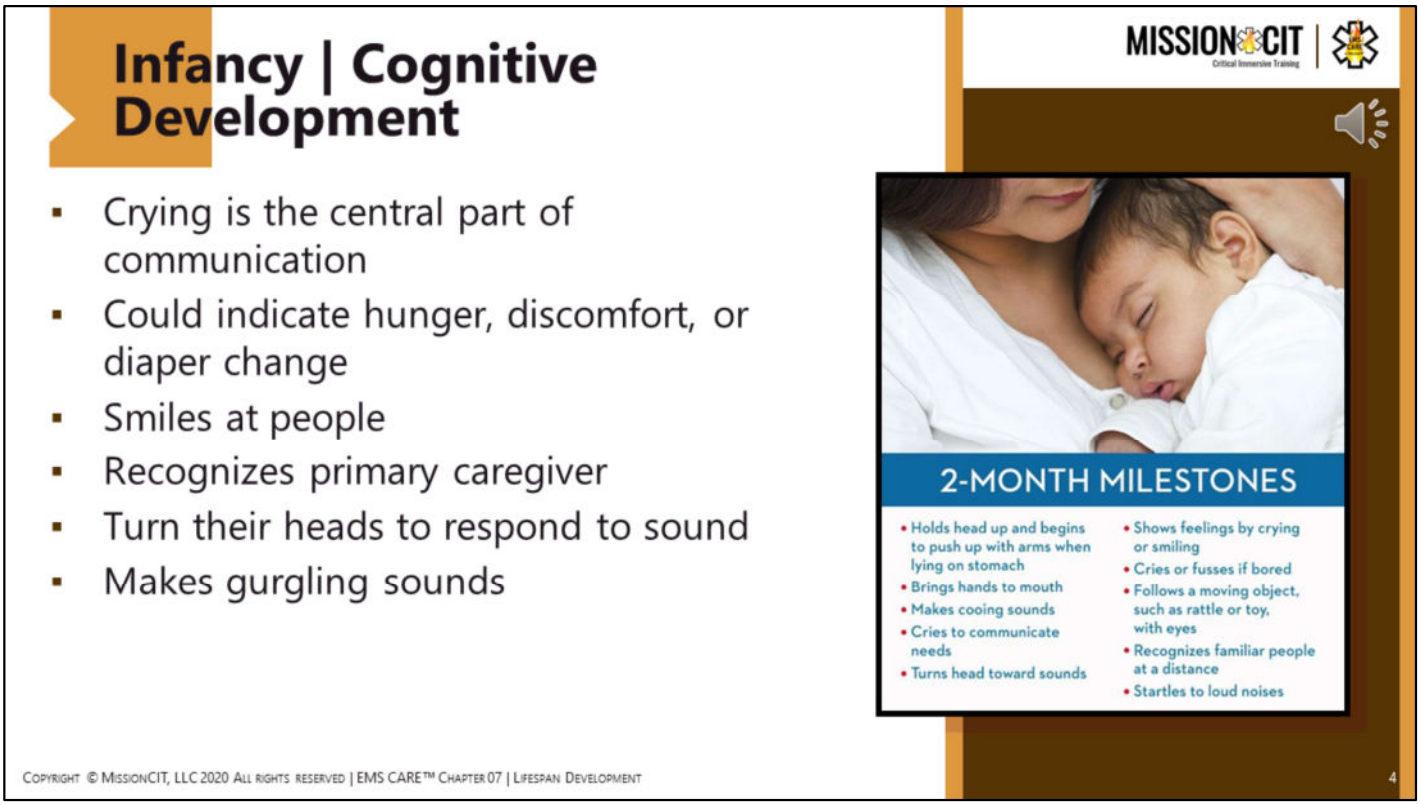
One of the most important things to understand is that an infant's physical development starts from the head and moves down to the other parts of the body.

During the first two months of birth, infants tend to gaze at other faces and turn their heads from left to right, and vice-versa while lying on their back. The hands are fisted and the arms are flexed, and the baby can firmly grasp the finger of an adult.

The infant can suck milk as soon as its mouth touches the nipple.

The neck is not strong enough to hold the head, so pulling up to a sitting or standing position is not recommended.

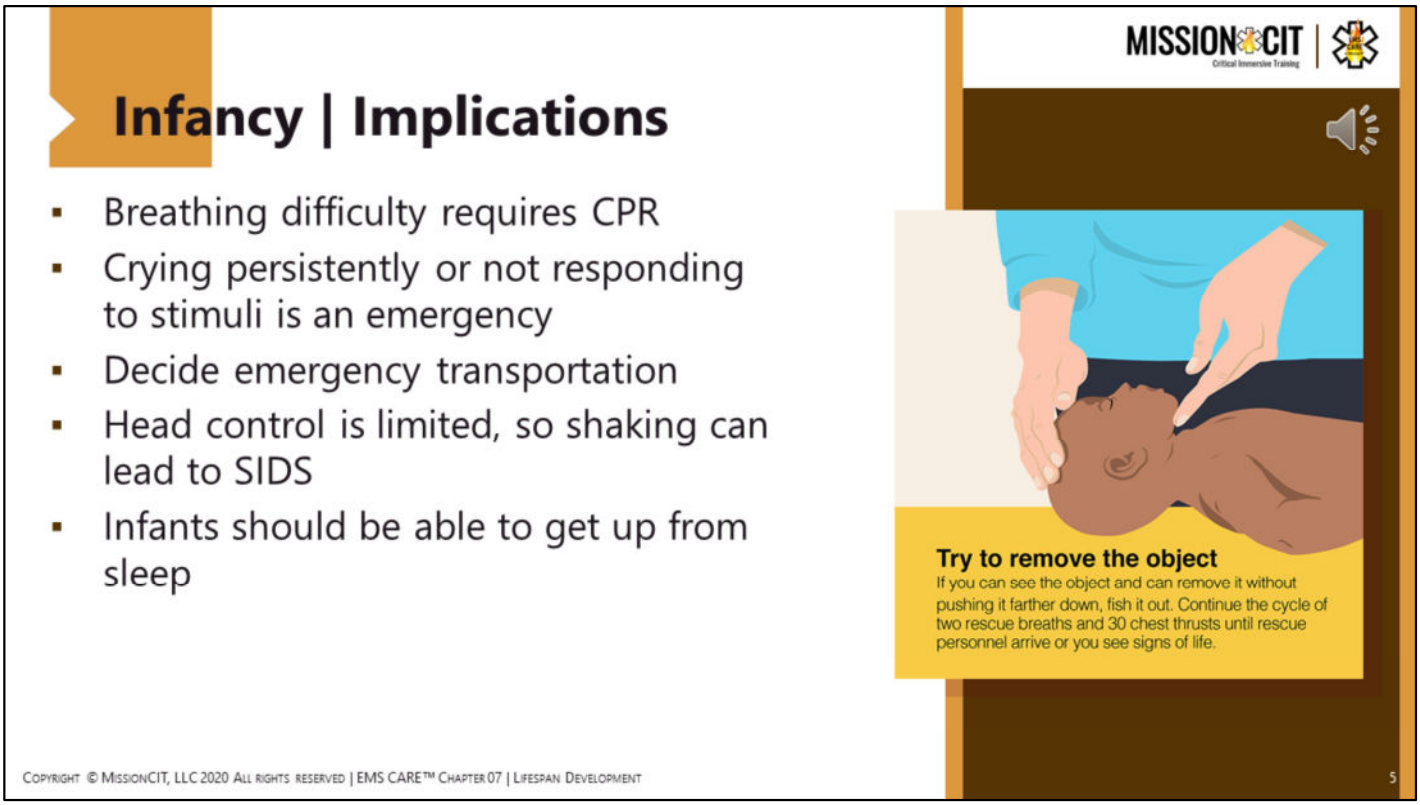
More importantly, they tend to sleep for about 16 hours a day, as this is what enables them to grow quickly.



The most prominent cognitive development is crying, as this is the only way for the baby to communicate to you when it's hungry or when it is uncomfortable. Many times, it is a sign that the baby needs a diaper change.

This is your cue to understand what an infant needs. After its basic needs such as hunger are met, the crying should stop. If it doesn't, then it's a sign of persistent illness.

By the end of two months, the baby starts to smile at people, and some of them recognize the primary caregiver. They may be able to bring their thumbs to their mouth and suck to calm themselves. Infants will also turn their heads to respond to sound and can make gurgling sounds.



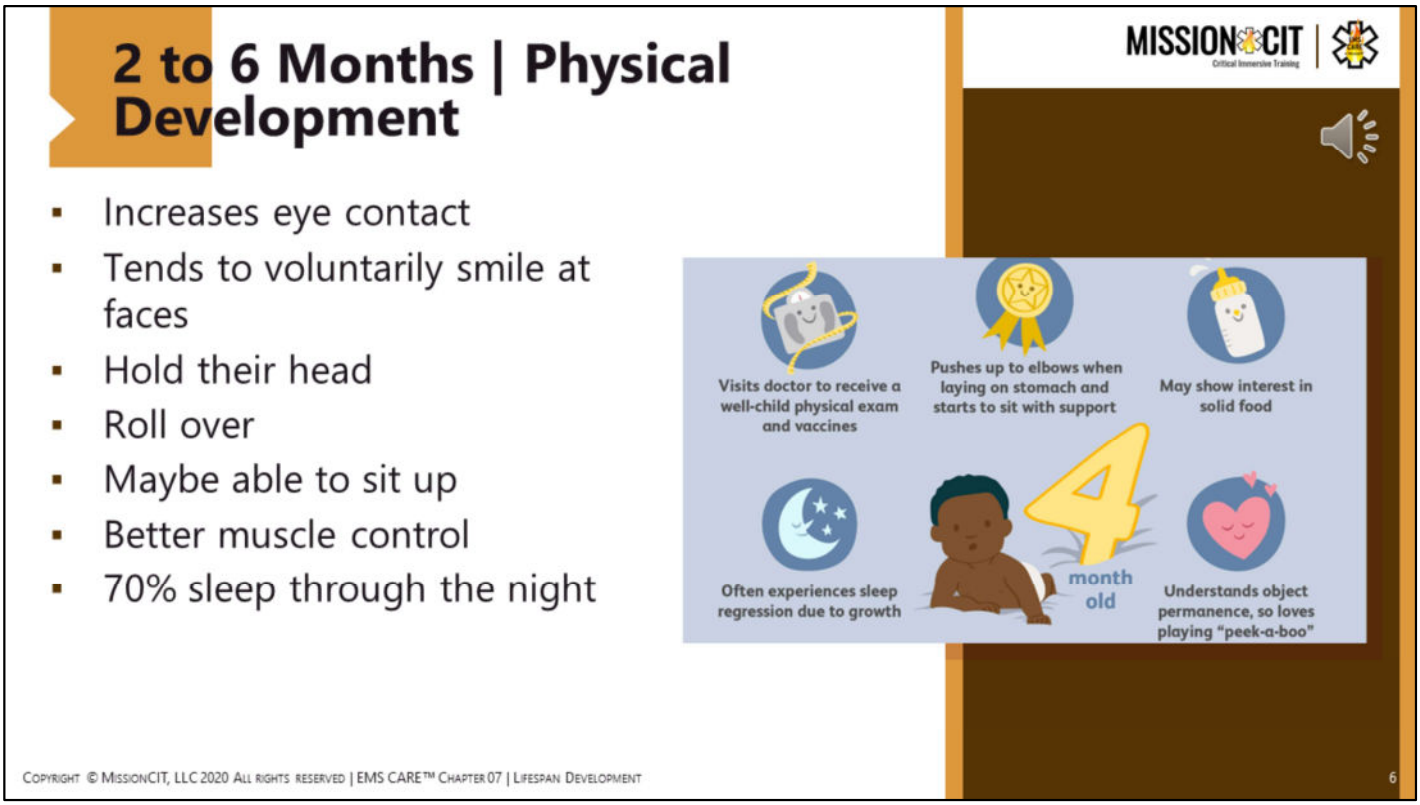
As an EMT, you will be called when a child is having breathing difficulties, not responding to stimuli, or is crying uncontrollably.

Your first task is to check the infant's airways to ensure there is no obstruction. Do CPR if you have to and arrange for emergency transportation.

If a child has been crying persistently, it is a sign of serious illness. So, check for CAB and transport the infant and a parent immediately to a nearby hospital.

Another aspect to keep in mind is that you should be able to arouse infants quickly, even if they tend to sleep a lot. If the baby is not waking up, it should be considered an emergency.

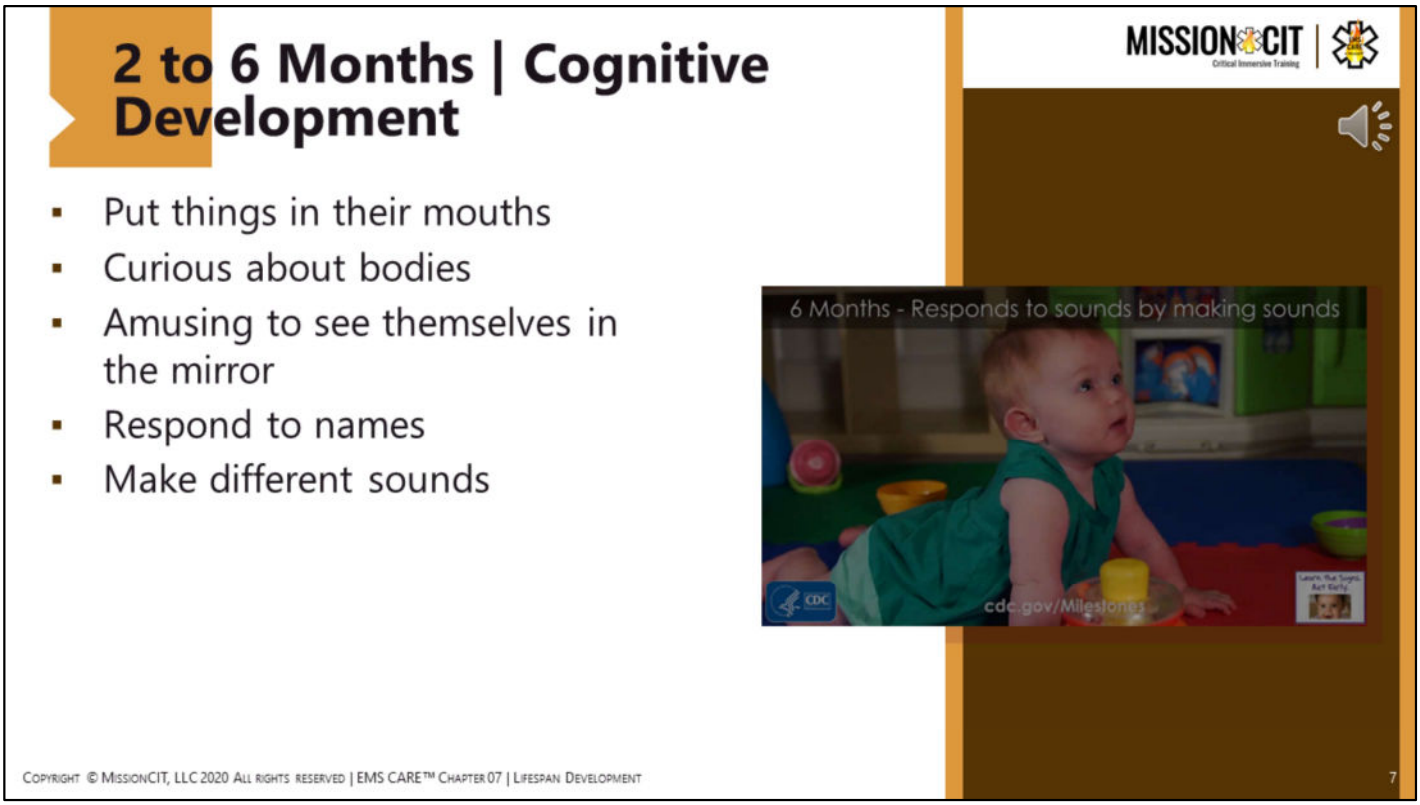
Remember, the head control is limited, so shaking the infant is not advised as it can lead to Sudden Infant Death Syndrome or SIDS.



During this time, the baby increases eye contact with caregivers and parents and tends to voluntarily smile at faces. They also tend to hold their head, and most babies would have rolled over by six months of age. Some of them may even be able to sit up.

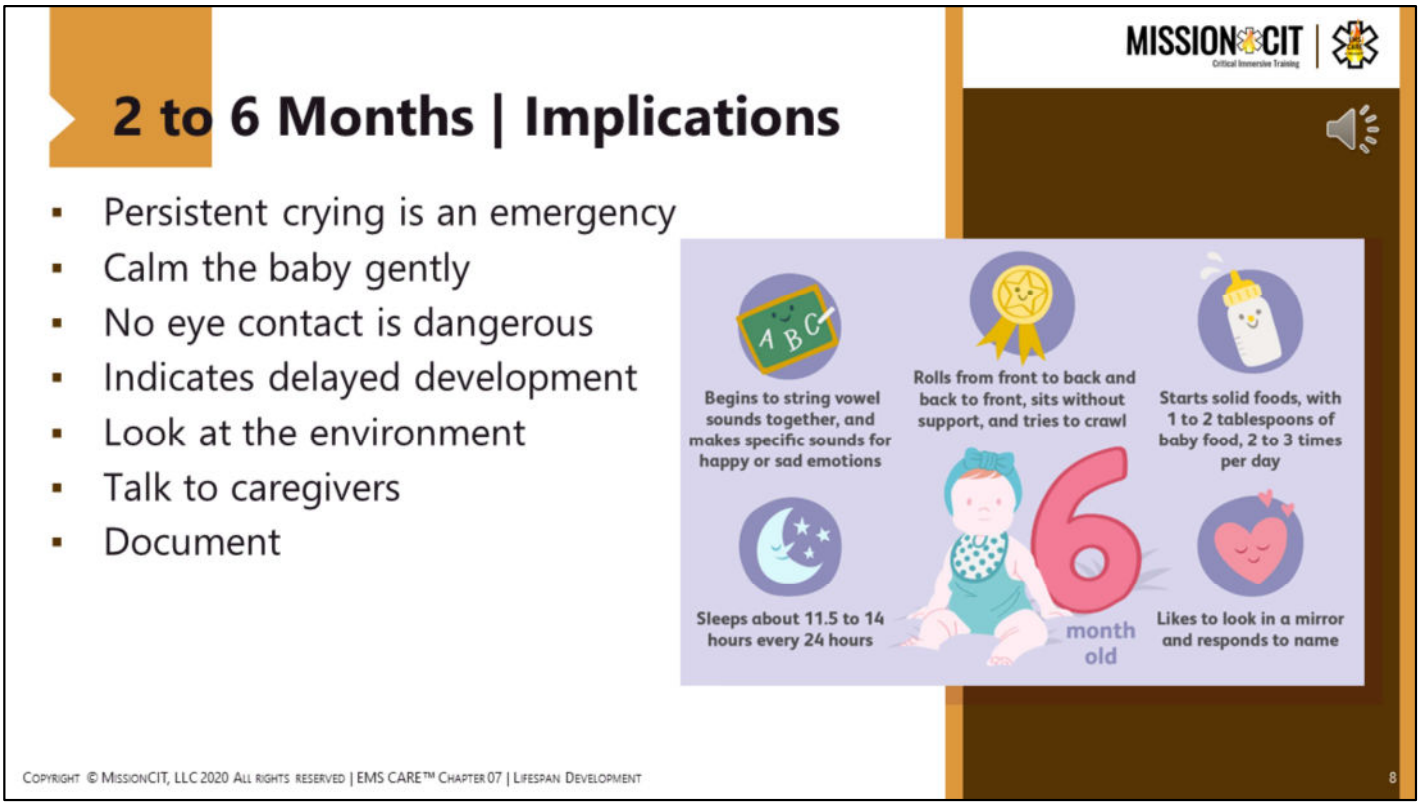
They get better eye muscle control, so infants can hold large objects with their hands. Also, they will have better control over the movement of their hands and legs.

More than 70 percent of babies can sleep through the night and may have a few short naps throughout the day.



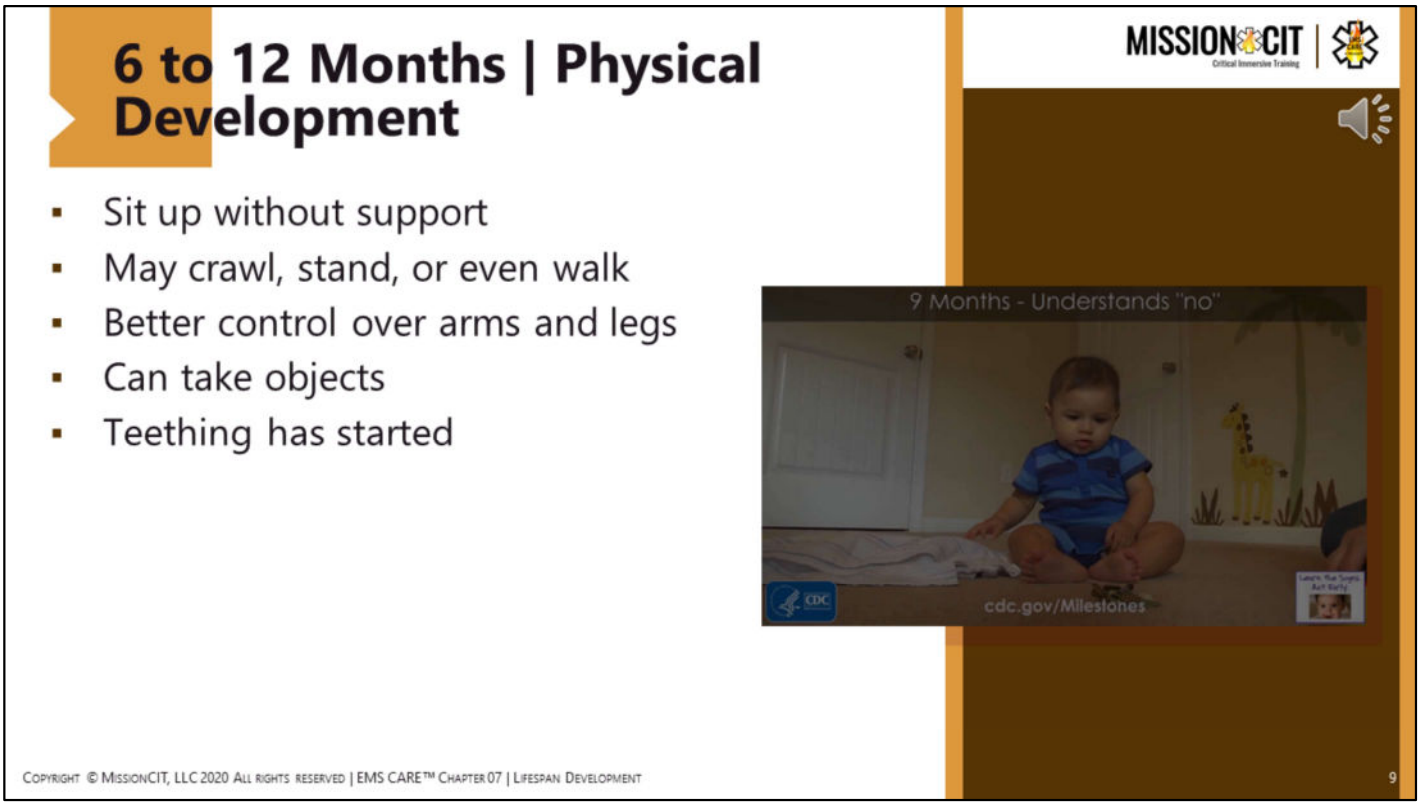
By six months of age, babies are ready to explore their surroundings and may start putting things in their mouths. They are also likely to be curious about their bodies. This is why they find it amusing to see their reflection in the mirror, though they may not know that it is their reflection!

Some babies respond to their name, make different sounds to express their emotions, and may require attention from the primary caregiver.



In this stage too, persistent crying is a sign of serious illness that may require emergency transportation. As soon as you see a crying child, consider calming the baby down. If nothing seems to work, be ready to transport the infant and one or both parents.

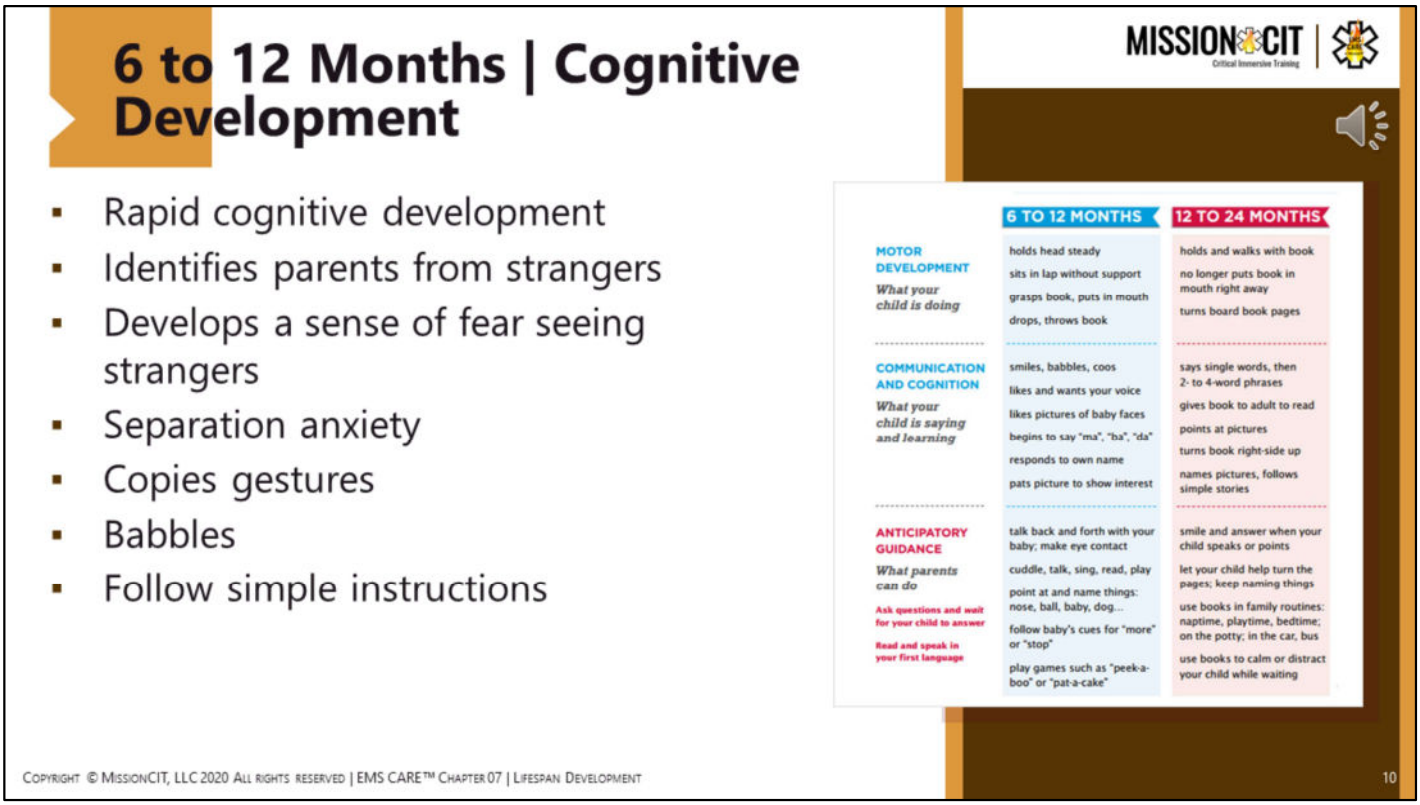
Remember, if the baby is not making eye contact, it could indicate delayed development or a depressed mental status. At this point, talk to the parents and look at the child's surroundings, and document all that you see and hear.



When a baby is 12 months, it must be able to sit up without support. Some babies can also crawl, stand-up, or even walk, depending on variations in growth. Each child is different and grows differently.

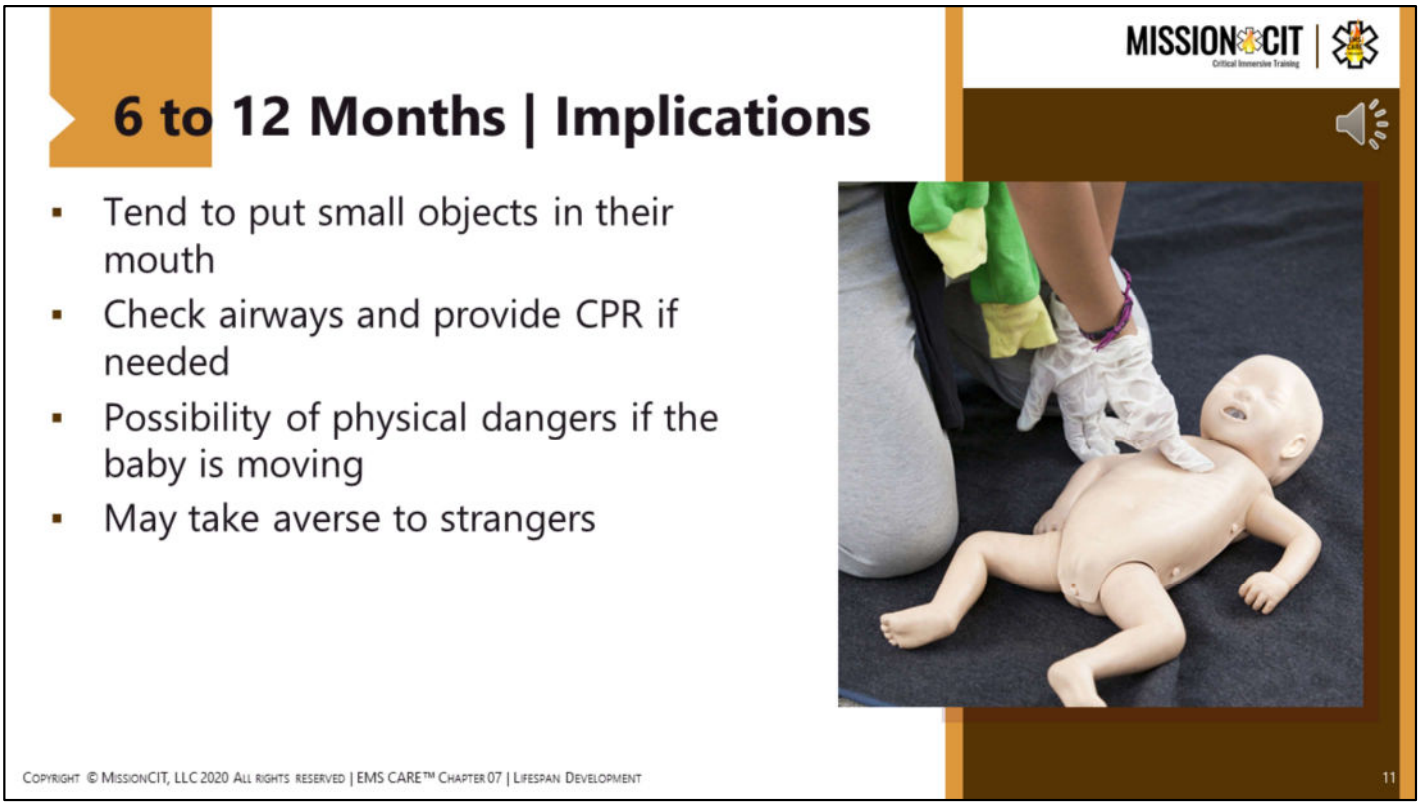
They also have a better grasp of the movement of their arms and have a firm grasp. Using this control, they will be able to take many objects, and invariably, everything will go to their mouth as this is a way for them to explore the world around them. They can also take things out of a container or box and put them back in.

By 12 months of age, the teething process has started and they may be able to start chewing soft foods.



Rapid cognitive development happens at this age. First off, the baby can separate parents from strangers and develop a sense of fear when they see strangers. Many children also experience separation anxiety or a sense of fear when they are separated from their parents.

By 12 months of age, babies tend to copy gestures, may communicate better using both babble and actions. They can also follow simple instructions like pick up toys.



From an EMT standpoint, babies can put small objects in their mouth, that can eventually lead to choking. So, check if the baby's airways are clear. There is also a possibility for poisoning, given the baby's tendency to explore everything with their mouths.

If the baby is crawling or walking, the possibility of physical dangers is high too. So, look around the environment for possible dangers that the baby could be exposed to.

Finally, remember that babies know you're a stranger and may cry a lot when they see you. Throughout the entire time, keep the child and the parent together as much as you can.